



BRAZOS VALLEY SOLID WASTE MANAGEMENT AGENCY

November 30, 2006

Dr. Richard Carmichael, MSW Permits
Texas Commission on Environmental Quality
12100 Park 35 Circle
Building F-4, MC-124
Austin, TX 78753

SENT 12/4/06

Re: Rock Prairie Road Landfill, College Station, Brazos County, Texas
Municipal Solid Waste (MSW) Permit No. 1444-C
Permit Modification-Landfill Gas Remediation Plan

Dear Dr. Carmichael:

Enclosed for your review is the proposed municipal solid waste (MSW) modification for changes to the Brazos Valley Solid Waste Management Agency's (BVSWMMA) Landfill Gas Management Plan (LGMP) for the Rock Prairie Road Landfill MSW Permit 1444-C in Brazos County, Texas. The requested modification (this letter and attachments) does not modify the existing LGMP document, but adds additional information to be included into the existing plan as per requirements of 30 TAC §305.70(e). Attachments include the proposal describing the requested change and explanation of why the change is necessary as per 30 TAC §305.70(e)(1) and (2), an updated landowner map and list as required by 30 TAC §330.59(c)(3), the TCEQ "Permit or Registration Application for MSW Facility" Part 1 Section A, and a revised Figure No. C-12 for substitution of existing document as per 30 TAC §305.70(e)(3). The modification request has been posted for public viewing on the City of College Station website under Featured Links - Public Notices at www.cstx.gov/home/index.asp?page=2067 as per 30 TAC §330.57(i). Necessary fees as part of 30 TAC §330.53(b), for minor modification and notification, have been paid and a copy of the transaction is included in the attachments.

This minor permit modification is allowed by TCEQ regulations, 30 TAC §305.70(k)(5). The attachments included with this letter show requested changes, which are minor in nature and do not lessen the existing LGMP. BVSWMMA is requesting the following modification to expand the ability to collect the landfill gas generated. These changes result from findings at the Rock Prairie Road Landfill during routine methane monitoring to satisfy procedures as part of 30 TAC §330.371(b) and Section 4.0 of BVSWMMA's existing LGMP.

This landfill gas exceedance was identified on June 30, 2006 and in accordance with the requirements of the LGMP, facility personnel made an immediate determination of potential risk to nearby buildings and personnel. The Site Manager and monitoring

personnel confirmed that the elevated reading posed no immediate risk to adjacent properties. Completing these verifications fulfilled the requirements of 4.1.1 of BVSWMAs LGMP and complied with 30 TAC 330.371(c). In addition, BVSWMA provided written notification on July 5, 2006 to the TCEQ as required by 30 TAC 330.371(c) of the regulations and Section 4.2 of BVSWMAs LGMP.

Subsequent to these observations and notifications, BVSWMA personnel undertook the verification procedures outlined in 4.1.2 of BVSWMAs LGMP. These verification procedures are designed to determine if the detected levels accurately depict excessive levels of explosive gases or if erroneous readings are evident. These activities were accomplished as outlined in our previous letter dated July 5, 2006. With confirmation of the initial readings, we have undertaken expanded investigation to evaluate the extent of the migration in an attempt to identify the cause for this event. This expanded investigation has included more frequent monitoring of the impacted probe, along with test hole boring and bar-hole probe testing in the vicinity of the impacted monitoring probes. Results of these additional investigations confirmed the continued presence and extent of the elevated gas levels.

Based on the accumulated data, BVSWMA has evaluated the available alternatives and determined the best corrective option for implementation. The following proposal represents an expansion of Section 4.4 of BVSWMAs LGMP, providing details of the chosen plan and the anticipated results of implementing the described plan.

Sincerely,

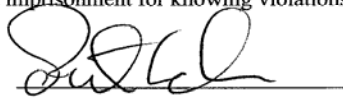


Doug Thompson,
Environmental Compliance Officer,
BVSWMA

Cc: Fred Logan, TCEQ Region 9
BVSWMA Operating Record

Applicant's Statement

As signatory to the application on behalf of the Brazos Valley Solid Waste Management Agency (defined in 30 TAC 305.44) I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Pete Caler
Executive Director
Brazos Valley Solid Waste Management Agency

1 DEC 06 (Date)



BRAZOS VALLEY SOLID WASTE MANAGEMENT AGENCY

**Proposal for a Trench Collector, Installed to Control
Methane Migration
Rock Prairie Road Landfill
MSW Permit No. 1444C**

**Prepared by BVSWMMA
November, 2006**

Background

The Brazos Valley Solid Waste Management Agency (BVSWMA) has developed the following proposal to address the landfill gas recently detected while site personnel were performing routine monitoring. This proposal will address the specific site details of the area around the monitor well and the nearest landfill sector, results of monitoring and soil probing events since detection, theories and explanations for gas buildup, and our proposed remediation strategy. A general site location map of the facility and the area of interest are presented in Attachment 1.

On June 30, 2006, methane was detected at the BVSWMA Rock Prairie Road Landfill in gas monitoring probe G-1. The concentration found at that time was 13% methane by volume. Site personnel attempted several bar-hole probes to detect the gas between the monitor well and the landfill in order to track the plume. No methane could be found in any bar-hole probes at a depth of two feet. A nine inch auger was then used to drill five foot test holes along the outside of the anchor trench and surrounding the gas monitoring well. No methane has been detected in any test holes around the well. Methane concentrations of 30-40% are present in test holes along roughly 150 feet of the anchor trench. Contained in this proposal is a map of the relevant area with locations of the test holes (Attachment 1) and chart showing test hole readings found at these locations (Attachment 2).

The landfill sector adjacent to monitor well G-1 was the first Subtitle D sector installed at the Rock Prairie Road Landfill. The liner consists of a two foot clay sub-liner, a typical single layer of textured 60 mil HDPE Geomembrane, a single layer of Geonet drainage composite, and two feet of protective clay cover. We feel the landfill gas is migrating out of the landfill through the permeable Geonet layer which extends through the anchor trench. This assessment of the landfill gas source has been since validated after five sections were cross trenched to reveal the liner approximately 10' down the sideslope. We found methane concentration were higher in the soil above the Geonet and

concentrations decreased the further we probed to the surface. We will recommend that the permeable Geonet drainage layer stop short of grade level and not extend into the anchor trench for future cell construction.

Proposed Solution

BVSWMA proposes to resolve the elevated landfill gas found migrating outside the landfill boundaries by installing a trench collector, an active horizontal vent connected to the existing gas collection and control system (GCCS), in the affected area to collect and flare the gas. The Rock Prairie Road Landfill installed this GCCS and candlestick flare station in March 2005 as part of closure for approximately 70 acres of landfill. The collection system consists of 84 vertical wells and has been in operation since August 2005. Past occurrences of methane migration have been successfully controlled since the installation of this system and we feel this recent finding of elevated landfill gas readings can also be resolved effectively with a trench collector.

Refer to Attachment 3 for a schematic of the proposed trench collector. The trench collector, a 6" perforated HDPE pipe, will be placed in an eight foot trench excavated within the waste and will be positioned as close as possible to the liner system to create ultimate influence of the traveling gas but without disturbing the integrity of the liner. The perforated section of pipe will be packed in 2' rock and backfilled with compacted trash/spoil to final. With the length of area experiencing methane migration being approximately 150', the trench and pipe will extend 50' on both ends making the total length of active vent pipe to 250' to ensure successful collection of landfill gas. The depth of the trench will vary due to a 1% slope down to the north, away from the vertical well installation. The trench pipe will be connected to a 4" solid HDPE pipe with an eccentric reducer that will extend approximately 550' on the landfill surface to tie into existing vertical gas well H-14. The 4" solid pipe will then be connected to existing vertical well H-14, an unutilized well due to poor methane quality produced, so that we may take advantage of the monitoring equipment already in place at the well's monitoring station (temperature port, orifice plate for flow determination, flow control

valve and connections for gas quality readings). At the end opposite the connection, the trench pipe will extend above grade with a solid section of pipe and be capped. In case the pipe becomes watered in, this extension will serve as a cleanout.

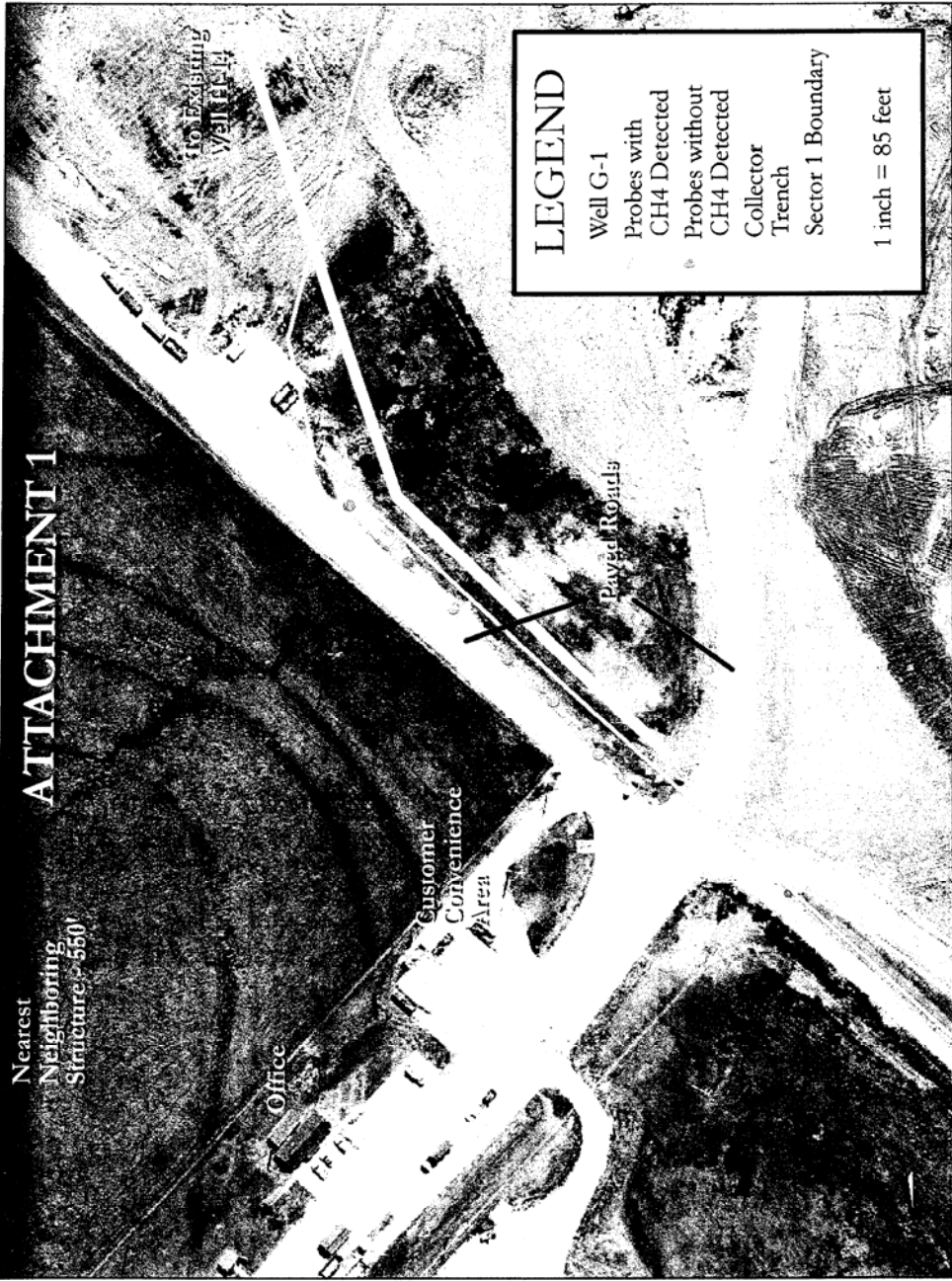
ADVANTAGES OF A TRENCH COLLECTOR OPTION

- Utilizes existing Gas Collection and Control System (GCCS)
- Less concerns over safety and nuisance issues (compared to passive vents)
- Ability to control vacuum applied to migration area
- We have seen positive results from past migration area since installation of the GCCS

CONCLUSIONS

BVSWMA has developed this remedial proposal as the best approach for the control of landfill gas in the area of interest. Installation of an active trench collector will help control the gas migration in a prompt, economical, and safe manner. Excavation began on August 9, 2006 and installation of the trench pipe was completed on August 12, 2006. After applying vacuum to the trench for the first 24 hours, methane levels recorded in perimeter well G-1 were 2.2% by volume. By Wednesday, August 16, methane levels in perimeter well G-1 were 0.0%.

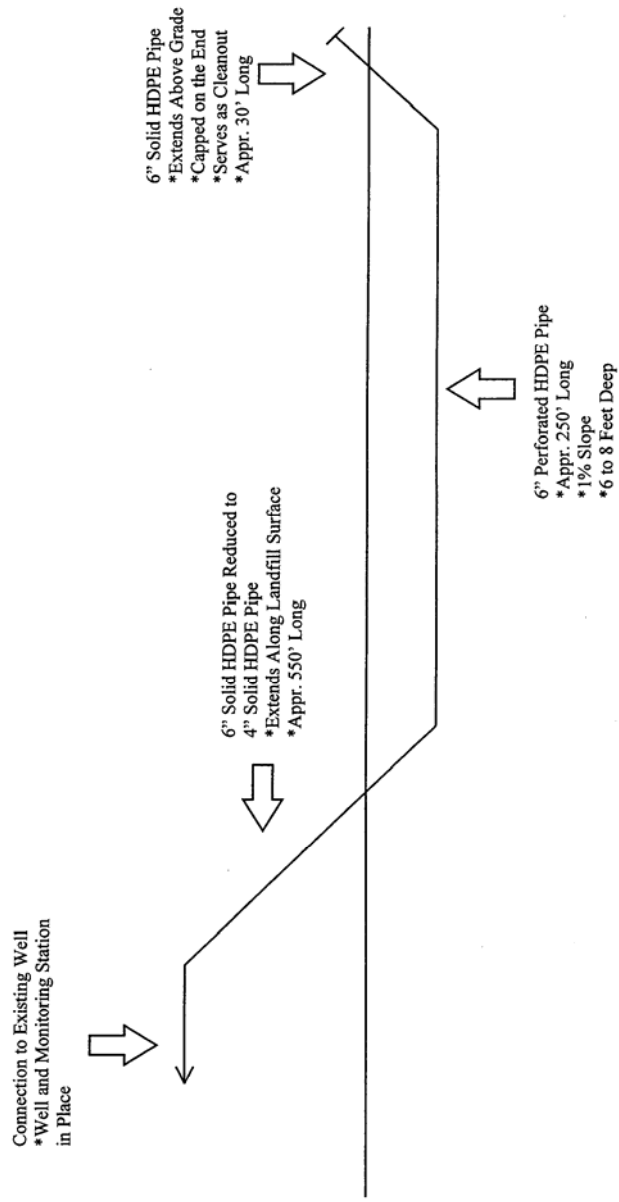
BVSWMA personnel will continue to evaluate the response in G-1 to determine the adequacy of the system and to assess the system's efficiency of controlling the landfill gas migration. The trench monitoring will be included in the "tuning" of wells as part of the GCCS program to monitor the quality and quantity of methane extracted from the landfill.



Gas Remediation Plan
For Rock Prairie Road Landfill
Well G-1 Monitoring Data

Device ID	Date/Time mm/dd/yy	CH4 %	CO2 %	O2 %	Balance %	Baro 'Hg	Rel Pressure 'H2O	% of LEL %
Well G-1	6/30/2006 12:46	12.9	17.9	10.4	58.8	29.74	0.06	---
Well G-1	7/1/2006 7:59	11.8	15.5	11.8	60.9	29.8	-4.08	---
Well G-1	7/3/2006 6:53	11.7	16.9	10.4	61	29.77	-9.29	---
Well G-1	7/4/2006 9:55	6.4	14.2	10.1	69.3	29.75	-0.59	---
Well G-1	7/5/2006 9:00	13	17.6	10.6	58.8	29.66	-8.01	---
Well G-1	7/6/2006 13:17	6.6	15.7	9.3	68.4	29.74	0.01	---
Well G-1	7/6/2006 13:20	3.8	8.6	10.6	77	29.74	-7.6	76
Well G-1	7/7/2006 9:11	12.3	17.2	10.5	40	29.72	-5.18	---
Well G-1	7/10/2006 17:07	25.3	35.3	5.8	33.6	29.6	0.14	---
Well G-1	7/12/2006 9:00	22	21	9.8	47.2	29.72	0.01	---
Collector Trench installed on 8/12								
Well G-1	8/14/2006 8:10	2.1	15.5	7.8	74.6	29.7	-0.99	42
Well G-1	8/15/2006 9:14	1.4	16	8.9	73.7	29.69	-0.34	28
Well G-1	8/16/2006 8:26	0	13.8	9	77.2	29.7	0.54	0
Well G-1	8/17/2006 13:31	0	0	20.2	79.6	29.66	0.02	0
Well G-1	8/18/2006 14:56	1.7	12.6	11.3	74.4	29.63	0.08	34
Well G-1	8/21/2006 8:37	1.8	16	9.1	73.1	29.74	0.62	36
Well G-1	8/28/2006 8:56	0.6	14.2	11	74.2	29.61	-11.23	12
Well G-1	9/6/2006 11:56	0	17.2	7.3	75.5	29.74	0.93	0
Well G-1	9/29/2006 12:56	0	9.6	10.3	80.1	29.75	0.02	0
Well G-1	10/10/2006 13:53	0	19.9	4.5	75.6	29.53	0	0
Well G-1	10/30/2006 15:05	0	26.8	3.8	69.4	29.56	0.02	0
Well G-1	11/29/2006 8:12	0	16.4	6.8	76.8	29.6	0	0

Landfill Gas Remediation Plan
For The Rock Prairie Road Landfill
Collector Trench Schematic



**BVSWMA Rock Prairie Road Landfill
Adjacent Property Owners
As of July 2006**

Map Ref	Acres	ID	Owner's Name & Address
A	7.17	R10579	BVSWMA P.O. Box 9960 College Station, TX 77842
B	384.19 6.7	R10581 R88895	City of College Station P.O. Box 9973 College Station, TX 77842
C	258.21	R88855	Pebble Creek Country Club, Inc. c/o Pebble Creek Development Company 4500 Pebble Creek Pkwy College Station, TX 77845
D	8.10	R88856	Pebble Creek Development Company c/o Young Brothers PO Drawer 1800 Waco, TX 76703
E	1.81	R10664	City of College Station P.O. Box 9973 College Station, TX 77842
F	0.56	R88864	Charles L. Brenton III Terri Bond Brenton 1111 12 th Man Circle College Station, TX 77845
G	7.65 2.35	R10703 R10704	Kay H. Durr 6903 Rock Prairie Road, E College Station, TX 77845
H	68.56 4.73	R10644 R10645	City of College Station P.O. Box 9973 College Station, TX 77842
I	3.37	R88865	Nita M. Holliday 7003 Rock Prairie Road College Station, TX 77845
J	0.35	R88865	William L. & Katherine E. Mies 1109 12 th Man Circle College Station, TX 77845-8979

Map Ref	Acres	ID	Owner's Name & Address
K	66.3 8.61 44.0	R10591 R10592 R10604	Dolly Olden/Arthur D. Olden Family Trust 7804 Rock Prairie Road, E College Station, TX 77845
K	76.0	R10603	City of College Station P.O. Box 9973 College Station, TX 77842
L	1.42	R10702	Roger Pompa 11515 Sageperry Drive Houston, TX 77089
M	5.0	R10593	Weingarten Realty Investors Paul A. Wilke PO Box 924133 Houston, TX 77292-4137
N	6.2	R10666	Lily C. Watson 3813 Oakwood Street Bryan, TX 77801

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Your transaction is complete. Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt and the vouchers for your records. An email receipt has also been sent.

Transaction Information

Trace Number: 582EA000017617
Date: 11/29/2006 04:55 PM
Payment Method: CC - Authorization 0000231187
Amount: \$150.00
ePay Actor: Doug Thompson
Actor Email: dthompson@cstx.gov
IP: 199.5.231.100

Payor Information

Payor Name: Doug Thompson
Company: Bvswma
Address: 77842
Phone: 979-764-3832

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
20775	NONHAZARDOUS WASTE PERMIT - NEW, AMENDMENTS & MODIFICATIONS		\$100.00
20776	30 TAC 305.53B HWP NOTIFICATION FEE		\$50.00
Total fees for transaction:		\$150.00	

[ePay Again](#)[Exit ePay](#)

Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt for your records.



Texas Commission on Environmental Quality
Permit or Registration Application for
Municipal Solid Waste Facility

Part I

A. General Information

Facility Name:	Rock Prairie Road Landfill			
Physical or Street Address (if available):	7600 Rock Prairie Road			
(City) (County)(State)(Zip Code):	College Station	Brazos	TX	77842
(Area Code) Telephone Number:	(979) 764-3832			
Charter Number:				

If the application is submitted on behalf of a corporation, provide the Charter Number as recorded with the Office of the Secretary of State for Texas.

Operator Name ¹ :	Brazos Valley Solid Waste Management Agency			
Mailing Address:	P.O. Box 9960			
(City) (County)(State)(Zip Code):	College Station	Brazos	TX	77842
(Area Code) Telephone Number:	(979) 764-3832			
(Area Code) FAX Number:	(979) 764-3534			
Charter Number:				

If the permittee is the same as the operator, type "Same as Operator".

Permittee Name:	Same as Operator			
Physical or Street Address (if available):				
(City) (County)(State)(Zip Code):			TX	
(Area Code) Telephone Number:				
Charter Number:				

If the application is submitted by a corporation or by a person residing out of state, the applicant must register an Agent in Service or Agent of Service with the Texas Secretary of State's office and provide a complete mailing address for the agent. The agent must be a Texas resident.

Agent Name:				
Mailing Address:				
(City) (County)(State)(Zip Code):				
(Area Code) Telephone Number:				
(Area Code) FAX Number:				

Application Type:			
<input type="checkbox"/> Permit	<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Minor Amendment	
<input type="checkbox"/> Registration	<input checked="" type="checkbox"/> Modification	<input type="checkbox"/> Temporary Authorization	

¹ The operator has the duty to submit an application if the facility is owned by one person and operated by another [30 TAC 305.43(b)]. The permit will specify the operator and the owner who is listed on this application [Section 361.087 Texas Health and Safety Code].

<input checked="" type="checkbox"/>	w/Public Notice	
<input type="checkbox"/>	w/out Public Notice	<input type="checkbox"/> Notice of Deficiency Response

Facility Classification:

<input type="checkbox"/> Type I	<input checked="" type="checkbox"/> Type IV	<input type="checkbox"/> Type V	<input type="checkbox"/> Type IX
<input type="checkbox"/> Type I AE	<input type="checkbox"/> Type IV AE	<input type="checkbox"/> Type VI	

Activities covered by this application (check all that apply):

<input type="checkbox"/> Storage	<input type="checkbox"/> Processing	<input checked="" type="checkbox"/> Disposal
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Waste management units covered by this application (check all that apply):

<input type="checkbox"/> Containers	<input type="checkbox"/> Tanks	<input type="checkbox"/> Surface Impoundments	<input checked="" type="checkbox"/> Landfills
<input type="checkbox"/> Incinerators	<input type="checkbox"/> Composting	<input type="checkbox"/> Type IV Demonstration Unit	<input type="checkbox"/> Type IX Energy/Material Recovery
<input type="checkbox"/> Other (Specify)		<input type="checkbox"/> Other (Specify)	
<input type="checkbox"/> Other (Specify)		<input type="checkbox"/> Other (Specify)	

Is this submittal part of a Consolidated Permit Processing request, in accordance with 30 TAC Chapter 33?

☐ Yes ☒ No

If yes, state the other TCEQ program authorizations requested.

Provide a brief description of the portion of the facility covered by this application. For amendments, modifications, and temporary authorizations, provide a brief description of the exact changes to the permit or registration conditions and supporting documents referenced by the permit or registration. Also, provide an explanation of why the amendment, modification, or temporary authorization is requested.

Notice modification to existing Landfill Gas Management Plan; response to gas exceedance

Does the application contain confidential Material? ☐ Yes ☒ No

If yes, cross-reference the confidential material *throughout the application* and submit as a separate document or binder conspicuously marked "CONFIDENTIAL."

Bilingual Notice Instructions

For certain permit applications, public notice in an alternate language is required. If an elementary school or middle school nearest to the facility offers a bilingual program, notice may be required to be published in an alternative language. The Texas Education Code, upon which the TCEQ alternative language notice requirements are based, trigger a bilingual education program to apply to an entire school district should the requisite alternative language speaking student population exist. However, there may not exist any bilingual-speaking students at a particular school within a district which is required to offer the bilingual education program. For this reason, the requirement to publish notice in an alternative language is triggered if the nearest elementary or middle school, as a part of a larger school district, is required to make a bilingual education program available to qualifying students and either the school has students enrolled at such a program on-site, or has students who attend such a program at another location in satisfaction of the school's obligation to provide such a program as a member of a triggered district.

Landfilling/Earthmoving Equipment Types	Personnel Experience or Licenses

For mobile liquid waste processing units, submit a list of all solid waste, liquid waste, or mobile waste units that the owner and operator have owned or operated within the past five years. Submit a list of any final enforcement orders, court judgments, consent decrees, and criminal convictions of this state and the federal government within the last five years relating to compliance with applicable legal requirements relating to the handling of solid or liquid waste under the jurisdiction of the commission or the United States Environmental Protection Agency. Applicable legal requirement means an environmental law, regulation, permit, order, consent decree, or other requirement.

Solid waste, liquid waste, or mobile waste units owned or operated within past 5 years	Texas and federal final enforcement orders, court judgments, consent decrees, and criminal convictions

G. Appointments

Provide documentation that the person signing the application meets the requirements of 30 TAC §305.44, Signatories to Applications. If the authority has been delegated, provide a copy of the document issued by the governing body of the owner or operator authorizing the person that signed the application to act as agent for the owner or operator.

H. Application Fees

For a new permit, registration, amendment, modification, or temporary authorization, submit a \$150 application fee.

For authorization to construct an enclosed structure over an old, closed municipal solid waste landfill in accordance with 30 TAC 330 Subchapter T, submit a \$2,500 application fee.

If paying by check, send payment to:

Texas Commission on Environmental Quality
Financial Administration Division, MC 214
P. O. Box 13087
Austin, Texas 78711-3087

Payment maybe made online using TCEQ e-pay at www.tceq.state.tx.us/e-service/index.html	
E-pay confirmation number	TRACE# 582EA000017617

Signature Page

I, PETE CALER (Operator), EXEC. DIRECTOR, BWSWMA (Title)

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: *Pete Caler* Date: 1 DEC 06

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _____, hereby designate _____
(Print or Type Operator Name) (Print or Type Representative Name)

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Printed or Typed Name of Operator or Principal Executive Officer

Signature

SUBSCRIBED AND SWORN to before me by the said Pete Caler

On this 1st day of December, 2006

My commission expires on the 20th day of May, 2009



Danielle Johnson
Notary Public in and for
Brazos County, Texas

(Note: Application Must Bear Signature & Seal of Notary Public)